

Assignment 9-4 Integer Addition 5

The problem is to add two integers a and b . ($0 \leq a, b < 10^{250}$)

Input

The input consists of t ($30 \leq t \leq 40$) test cases. The first line of the input contains only positive integer t . Then t test cases follow. Each test case consists of two lines which give the two integers a and b ($0 \leq a, b < 10^{250}$).

Output

For each test case, you are to output a single line containing the sum of a and b .

Sample Input

```
3
10
3
4
0
0
8
```

Sample Output

```
13
4
8
```

Part of the program

You are required to write the function `addition` to complete the following program which solves this problem. In your program, you cannot declare global variables or static arrays

```
#include <iostream>
#include <cstring>
#include <vector>
using namespace::std;

// sum = addend + adder
vector< int > addition( vector< int > addend, vector< int > adder );

int main()
{
    char strA[ 251 ], strB[ 251 ];
    int T;
```

```

cin >> T;
for( int t = 0; t < T; ++t )
{
    cin >> strA >> strB;

    int addendSize = strlen( strA );
    vector< int > addend( addendSize );
    for( int i = 0; i < addendSize; ++i )
        addend[ i ] = strA[ addendSize - 1 - i ] - '0';

    int adderSize = strlen( strB );
    vector< int > adder( adderSize );
    for( int i = 0; i < adderSize; ++i )
        adder[ i ] = strB[ adderSize - 1 - i ] - '0';

    vector< int > sum = addition( addend, adder );

    for( int i = sum.size() - 1; i >= 0; i-- )
        cout << sum[ i ];
    cout << endl;
}
}

// sum = addend + adder
vector< int > addition( vector< int > addend, vector< int > adder )
{
    int addendSize = addend.size();
    int adderSize = adder.size();
    int sumSize = ( addendSize >= adderSize ) ? addendSize + 1 : adderSize +
1;

}

```